

***WE CLAIM:***

1. A retractive composite web comprising:
  - a) an extensible, fluid permeable substrate having at least one direction of extensibility in an XY plane;
  - b) a pattern of untensioned coalesced elastomeric stripes contained on an XY plane surface of the substrate in an add-on amount of between about 2.5 weight percent to about 100 weight percent of the composite web;
  - c) each longitudinal axis of the coalesced elastomeric stripes being oriented in the direction of substrate extensibility; and
  - d) the retractive composite being fluid permeable.
2. The retractive composite web of Claim 1 wherein the pattern is a regular pattern of 1 mm wide stripes spaced 1 cm apart.
3. The retractive composite web of Claim 1 wherein the pattern is a regular pattern of 4 mm wide stripes spaced 1 cm apart.
4. The retractive composite web of Claim 1 wherein the coverage area of stripes is between about 10.0 and about 40.0 percent of the surface area of the substrate.
5. The retractive composite web of Claim 1 wherein the coalesced elastomer is in an add on amount of between about 2.5 weight percent to about 10.0 weight percent.
6. The retractive composite of Claim 5 having a modulus of elasticity of between about 31 psi and about 44 psi.
7. The retractive composite web of Claim 1 wherein the coalesced elastomer is in an add on amount of between about 35.0 weight percent to about 40.0 weight percent.

8. The retractive composite of Claim 7 having a modulus of elasticity of about 51 psi.

9. The retractive composite web of Claim 1 wherein the coalesced elastomer is in an add on amount of between about 60.0 weight percent to about 65.0 weight percent.

10. The retractive composite of Claim 9 having a modulus of elasticity of between about 64 psi and about 70 psi.

11. The retractive composite web of Claim 1 wherein the coalesced elastomer is in an add on amount of about 100.0 weight percent.

12. The retractive composite of Claim 11 having a modulus of elasticity of about 121 psi.

13. The retractive composite web of Claim 1 wherein the coalesced elastomer is in an add on amount of up to about 100.0 weight percent.

14. The retractive composite web of Claim 1 wherein the extensible, fluid permeable substrate has a basis weight of about 0.6 osy.

15. The retractive composite web of Claim 14 wherein the coalesced elastomer is in an add on amount of between about 2.5 weight percent to about 10.0 weight percent.

16. The retractive composite of Claim 15 having a modulus of elasticity of between about 31 psi and about 44 psi.

17. The retractive composite web of Claim 14 wherein the coalesced elastomer is in an add on amount of between about 35.0 weight percent to about 40.0 weight percent.

18. The retractive composite of Claim 17 having a modulus of elasticity of about 51 psi.

19. The retractive composite web of Claim 14 wherein the coalesced elastomer is in an add on amount of between about 60.0 weight percent to about 65.0 weight percent.

20. The retractive composite of Claim 19 having a modulus of elasticity of between about 64 psi and about 70 psi.

21. The retractive composite web of Claim 14 wherein the coalesced elastomer is in an add on amount of about 100.0 weight percent.

22. The retractive composite of Claim 21 having a modulus of elasticity of about 121 psi.

23. The retractive composite web of Claim 1 wherein the extensible, fluid permeable substrate is a polypropylene spunbond nonwoven.

24. The retractive composite web of Claim 1 wherein the extensible, fluid permeable substrate is necked from about 35% to about 50%.

25. The retractive composite web of Claim 1 wherein the coalesced elastomeric stripes are provided in an amount sufficient to provide less than about 81.8% first cycle hysteresis.

26. The retractive composite web of Claim 1 wherein the coalesced elastomeric stripes are provided in an amount sufficient to provide less than about 61.2% second cycle hysteresis.

27. The retractive composite web of Claim 1 wherein the coalesced

elastomeric stripes are provided in an amount sufficient to provide less than about 35.0% first cycle immediate set.

28. The retractive composite web of Claim 1 wherein the coalesced elastomeric stripes are provided in an amount sufficient to provide less than about 36.0% second cycle immediate set.

29. The retractive composite web of Claim 1 wherein the coalesced elastomeric stripes are provided in an amount sufficient to provide a modulus of elasticity greater than 21 psi.

30. The retractive composite web of Claim 1 wherein the composite has a fluid intake time of between about 15 seconds to about 30 seconds for each cycle of a 3 cycle FIFE test.

31. The retractive composite web of Claim 1 wherein the elastomer is a styrenic block copolymer.

32. The retractive composite web according to of Claim 1 wherein the extensible, fluid permeable substrate is a necked nonwoven web.

33 A retractive composite web comprising:

a) an extensible, fluid permeable substrate having at least one direction of extensibility in an XY plane, the extensible, fluid permeable substrate being a spunbond nonwoven having a basis weight of about 0.6 osy;

b) a pattern of untensioned coalesced elastomeric stripes contained on an XY plane surface of the substrate in an add-on amount of between about 2.5 weight percent to about 100 weight percent of the composite web;

c) each longitudinal axis of the coalesced elastomeric stripes being oriented in the direction of substrate extensibility;

d) the retractive composite being fluid permeable, having a hysteresis of less than 83%, having less than about 35.0% first cycle immediate set, having less than about

36.0% second cycle immediate set, having a modulus of elasticity greater than 21 psi, and having a fluid intake time of less than 30 seconds for each cycle of a 3 cycle FIFE test.

34. The retractive composite web of Claim 33 further having a modulus of elasticity of between about 31 psi and about 44 psi.

35. The retractive composite web of Claim 33 further having a modulus of elasticity of between about 51 and about 121 psi.

36. A method of producing a retractive composite web comprising:

a) providing an extensible, fluid permeable substrate having a basis weight and at least one direction of extensibility in an XY plane;

b) applying a pattern of untensioned coalesced elastomeric stripes on an XY plane surface of the substrate in an add-on amount of between about 2.5 weight percent to about 100 weight percent of the composite web with each longitudinal axis of the coalesced elastomeric stripes oriented substantially along the direction of substrate extensibility; and

c) whereby the extensible, non-retractive, fluid permeable substrate is made retractive composite while remaining fluid permeable.

37. The method of producing a retractive composite web of Claim 36 further comprising:

necking the substrate to produce at least one direction of extensibility in an XY plane of the substrate.

38. The method of producing a retractive composite web of Claim 36 further comprising:

applying the pattern of untensioned coalesced elastomeric stripes by printing an aqueous emulsion of coalesced elastomers onto the substrate.

39. The method of producing a retractive composite web of Claim 36 further comprising:

applying the pattern of untensioned coalesced elastomeric stripes by

electrospinning at least one coalesced elastomeric fiber onto the substrate.

40. The method of producing a retractive composite web of Claim 36 further comprising:

applying the pattern of untensioned coalesced elastomeric stripes by electrospinning at least one coalesced elastomeric fiber onto the substrate.

41. The method of producing a retractive composite web of Claim 36 further comprising:

applying the pattern of untensioned coalesced elastomeric stripes by electrospinning elastomeric droplets onto the substrate.

42. The method of producing a retractive composite web of Claim 36 further comprising:

applying the coalesced elastomer as a 50% solids emulsion.

43. The method of producing a retractive composite web of Claim 36 further comprising:

applying the coalesced elastomer as a solution of Kraton 1101D SBS copolymer in a 14 wt% solids solution with a 75%/25% tetrahydrofuran (THF)/dimethylformamide (DMF) organic solvent.

44. The method of producing a retractive composite web of Claim 36 further comprising:

applying the coalesced elastomer as a regular pattern of 1 mm wide stripes spaced 1 cm apart.

45. The method of producing a retractive composite web of Claim further comprising:

applying the coalesced elastomer as a regular pattern of 4 mm wide stripes spaced 1 cm apart.

46. The method of producing a retractive composite web of Claim 36 further comprising:

applying the coalesced elastomer in a coverage area of stripes between about 5.0 and about 50.0 percent of the surface area of the substrate.

47. The method of producing a retractive composite web of Claim 36 further comprising:

applying the coalesced elastomer in an add on amount of between about 2.5 weight percent to about 10.0 weight percent.

48. The method of producing a retractive composite web of Claim 36 further comprising:

applying the coalesced elastomer in an add on amount of between about 35.0 weight percent to about 40.0 weight percent.

49. The method of producing a retractive composite web of Claim 36 further comprising:

applying the coalesced elastomer in an add on amount of between about 60.0 weight percent to about 65.0 weight percent.

50. The method of producing a retractive composite web of Claim 36 further comprising:

applying the coalesced elastomer in an add on amount of about 100.0 weight percent.

51. The method of producing a retractive composite web of Claim 36 further comprising:

applying the coalesced elastomer in an add on amount of up to about 100.0 weight percent.

52. The method of producing a retractive composite web of Claim 36 further comprising:

supplying the extensible, fluid permeable substrate in a basis weight of about 0.6 osy.

53. The method of producing a retractive composite web of Claim 36 further comprising:

supplying the extensible, fluid permeable substrate as a polypropylene spunbond nonwoven.

54. The method of producing a retractive composite web of Claim 36 further comprising:

necking the extensible, fluid permeable substrate from about 35% to about 50% to make the substrate extensible in the cross direction.

55. A disposable absorbent article comprising:

a) a liquid permeable liner layer having a top surface and a lower surface;

b) a substantially liquid impermeable outer cover; and

c) an absorbent layer disposed between said liner layer lower surface and said outer cover;

d) at least one of the liner absorbent core and outer cover having at least one layer comprising a retractive composite having:

i) an extensible, fluid permeable substrate having at least one direction of extensibility in an XY plane;

ii) a pattern of untensioned coalesced elastomeric stripes contained on an XY plane surface of the substrate in an add-on amount of between about 2.5 weight percent to about 100 weight percent of the composite web;

iii) each longitudinal axis of the coalesced elastomeric stripes being oriented in the direction of substrate extensibility; and

iv) the retractive composite being fluid permeable.

56. The disposable absorbent garment with waist and leg cuff areas with at least one of the waist and leg cuff areas comprising a retractive composite having:

i) an extensible, fluid permeable substrate having at least one direction of



extensibility in an XY plane;

ii) a pattern of untensioned coalesced elastomeric stripes contained on an XY plane surface of the substrate in an add-on amount of between about 2.5 weight percent to about 100 weight percent of the composite web;

iii) each longitudinal axis of the coalesced elastomeric stripes being oriented in the direction of substrate extensibility; and

iv) the retractive composite being fluid permeable.